

Amendments to the Drawings:

The attached sheet of drawings includes changes to Figure 3 (Fig. 3). This sheet replaces the original Figure 3. Formal drawings are submitted herewith. Approval by the Examiner is respectfully requested.

Attachment: Replacement Figure 3.

REMARKS

The Office Action dated October 5, 2006 has been received and reviewed by the applicant. Claims 1-32 are in the application. Claims 1-32 stand rejected.

OFFICE ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "**residual frequency coefficients**" and "**the high frequency content of the video signal in regions away from the gaze point**" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections

1. Claims 1-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In this case, there is no support found for the claimed features of "adjusting the residual frequency coefficients to reduce the high frequency content of the video signal in regions away from the gaze point" recited in step (d) of claim 1 and step (e) of claim 17. Specifically, where is the location of "high frequency content of the video signal" in regions away from the gaze
2. Claims 1 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Parker et al (U.S. Pub 2002/0122942. Art of record, IDS filed on July 24, 2003. Referred as Parker hereinafter)

The applied reference has a common assignee (Eastman Kodak Company) with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claims 1 and 17, Parker teaches:

- a) providing a frequency transform-encoded digital video signal having encoded frequency coefficients representing a sequence of video frames, wherein the encoding removes temporal redundancies from the video signal and encodes the frequency coefficients as base layer frequency coefficients in a base layer and as residual frequency coefficients in an

enhancement layer (see wavelet decomposition, for example, described in paragraph [0061]. Note that low and high frequency coefficients refer to claimed base and enhancement layer);

- (b) identifying a gaze point of an observer on the display (see gaze tracking algorithm depicted at 211 of figure 2a and data pointed mentioned in the document);
- (c) partially decoding the encoded digital video signal to recover the frequency coefficients (see decompressor depicted at 804 of figure 8b);
- (d) adjusting the residual frequency coefficients to reduce the high frequency content of the video signal in regions away from the gaze point (see figure 8b and paragraph [0030]);
- (e) recoding the frequency coefficients, including the adjusted residual frequency coefficients, to produce a foveated transcoded digital video signal (see item 806 of figure 8b and item 220 of figure 2c); and
- (f) displaying the foveated transcoded digital video signal to the observer (see monitor depicted at 105 of figure 1).

Conclusion

3. With regard to dependent claims 2-16 and 18-32, the cited prior art of record does not appear to teach or suggest the claimed features as variously defined in the claims.

APPLICANT'S REMARKS

Drawings

Fig. 3 has been amended to include the phrase “RESIDUAL FREQUENCY COEFFICIENTS” at element 303. The other phrase noted by the Examiner, i. e., “the high frequency content of the video signal in regions away from the gaze point” has been deleted from claims 1 and 17 and therefore the necessity of illustrating it in the claims is moot. A replacement Fig. 3 is enclosed. Reconsideration and withdrawal of the drawing objection is therefore requested.

Claim Rejections

1. The rejection of claims 1-32 under 35 USC 112 has been rendered moot by the cancellation of the phrase “adjusting the residual frequency coefficients to reduce the high frequency content of the video signals in regions away from the gaze point”. Claims 1 and 17 have been amended to include the following phrase in place of the deleted phrase, viz., “discard visually unimportant information”, which is supported among other places, at page 9, lines 17-18 of the specification. Claims 1-32 are deemed to fully satisfy all of the requirements of the Patent Statute and it is therefore requested that the ‘112 rejection be reconsidered and withdrawn.

2. The rejection of claims 1 and 17 under 35 USC 102(e) as being anticipated by Parker is traversed. It is a well established principle of patent law that, for a prior art reference to anticipate, each element of the rejected claims must be found in the reference. Such is not the case here. Contrary to the assertion by the examiner, Parker does not disclose the following element of claims 1 and 17, among others, “identifying a gaze point of an observer on the display”. In Parker, element 211 does not identify the gaze of the observer at a display but rather the gaze of an observer taking the digital image.

“Referring to Fig. 2b, information from a gaze tracking sensor 210 is processed by a gaze tracking algorithm 211 to provide gaze information 212 based on the user’s gaze during or near the time of capture. In a preferred embodiment, the gaze information 212 is in the form of a gaze center(x_g, y_g) where the user’s gaze was centered at the time of capture. The gaze center can be thought of as providing information regarding the main subject and the

background regions from the point of view of the photographer"(Emphasis added.).

The two features are completely different, the Parker gaze feature being generated at the time of image capture and the claimed gaze feature being generated at the time of image display.

In addition, Parker teaches storing additional information along with a compressed image, where this additional information can be used to decide to discard some of the compressed image data prior to transmission, if necessary. The claimed invention provides that the image is initially compressed without any such information. The information is only provided immediately prior to transmission. A relevant example is this: for a viewer watching a wide screen TV, you can potentially discard some information from regions of the image that the viewer is not gazing at without sacrificing overall image quality. In Parker, extra information is generated off-line regarding a belief of where a future viewer may gaze, and this information is stored with the compressed image. In the claimed invention, a current user's gaze is identified, and that information is sent by the network back to where the image is stored so that the appropriate image information is discarded.

It is submitted that claims 1 and 17 are novel and nonobvious over the cited art and should be allowed.

It is noted that the Examiner regaeds dependent claims 2-16 and 18-32 not taught in the prior art. These claims are therefore clearly allowable and should be allowed along with claims 1 and 17.

It is believed that these changes now make the claims clear and definite and, if there are any problems with these changes, Applicants' attorney would appreciate a telephone call.

In view of the foregoing, it is believed none of the references, taken singly or in combination, disclose the claimed invention. Accordingly, this application is believed to be in condition for allowance, the notice of which is respectfully requested.

Respectfully submitted,



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Enclosures: Drawing Replacement Sheet Figure 3
Transmittal Fee Sheet (original & copy)
Postcard